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#include <stdio.h>
```

```
int
main()
```

```
{
    int k;
    double p1 , p2 , p3 , p4 , p5 , p6;
    double a1 , a2;
    double m1 , m2;
    double const CONVERGE_TOL = 0.1;
    double delta , old_val;
    int i_count=0;
    p1 = 0; p2 = 0; p3 = 0; p4 = 0; p5 = 0; p6 = 0;
    delta = 1e16;

    while( delta > CONVERGE_TOL )
    {
        old_val = p1-p2;

        /* apply rule "I" */
        p2 -= 1000.0;
        p1 += 1000.0;

        /* apply rule "X" to intersection cells */
        a1 = (p1 + p3 + p5)/3;
        p1 = p3 = p5 = a1;
        a2 = (p2 + p4 + p6)/3;
        p2 = p4 = p6 = a2;

        /* apply rule "R" to resistive elements; */
        /* specifically R1 = 200 Ohms, R2 = 400 Ohms */
        m1 = (p3 - p4)/200.0;
        p3 -= m1;
        p4 += m1;
        m2 = (p5 - p6)/400.0;
        p5 -= m2;
        p6 += m2;

        fprintf( stdout , "p1 %10.2f\tp2 %10.2f\tp1-p2 %10.2f\n" , p1 , p2 , p1-p2 );
        fprintf( stdout , "p3 %10.2f\tp4 %10.2f\tp3-p4 %10.2f\n" , p3 , p4 , p3-p4 );
        fprintf( stdout , "p5 %10.2f\tp6 %10.2f\tp5-p6 %10.2f\n" , p5 , p6 , p5-p6 );

        /* check for convergence */
        delta = (p1-p2) - old_val;
        i_count++;

        fprintf( stdout , "iteration[%d] delta=%g \n\n" , i_count , delta );
    }
}
```

```
/*
p1      333.33    p2      -333.33    p1-p2      666.67
p3      330.00    p4      -330.00    p3-p4      660.00
p5      331.67    p6      -331.67    p5-p6      663.33
iteration[1] delta=666.667
```

```
p1      665.00    p2      -665.00    p1-p2      1330.00
p3      658.35    p4      -658.35    p3-p4      1316.70
p5      661.67    p6      -661.67    p5-p6      1323.35
iteration[2] delta=663.333
```

```
p1      995.01    p2      -995.01    p1-p2      1990.02
p3      985.06    p4      -985.06    p3-p4      1970.12
```

p5	990.03	p6	-990.03	p5-p6	sim1.c 1980.07
iteration[3] delta=660.017					

...

p1	66656.69	p2	-66656.69	p1-p2	133313.38
p3	65990.12	p4	-65990.12	p3-p4	131980.24
p5	66323.40	p6	-66323.40	p5-p6	132646.81
iteration[1757] delta=0.100286					

p1	66656.74	p2	-66656.74	p1-p2	133313.48
p3	65990.17	p4	-65990.17	p3-p4	131980.34
p5	66323.45	p6	-66323.45	p5-p6	132646.91
iteration[1758] delta=0.0997842					

*/